

Unit Planning Guide: Grade 8 Unit 2 of 6

Unit Title: Systems of Linear Equation	Pacing (Duration of Unit): 15 days
Grade: 8	Buffer Day(s): 5 days

Desired Results

Transfer Goals

Students will be able to independently use their learning to:

- **Make sense of problems and persevere in solving them.**
- Reason abstractly and quantitatively.
- **Construct viable arguments and critique the reasoning of others.**
- **Model with mathematics.**
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

Standards (Priority Standards in bold):

8.EE.8: Analyze and solve pairs of simultaneous linear equations.

8.EE.8a: Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.

8.EE.8b: Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.

8.EE.8c: Solve real-world and mathematical problems leading to two linear equations in two variables.

WIDA for English Language Learners

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting

Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

Meaning (*Mostly assessed through Performance Tasks/Assessments)

Big Ideas:

- Solve real world problems involving systems of linear equations.
- Interpret possible solutions and their meanings

Essential Questions: (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)

- How can systems of linear equations influence our decision making when comparing two events?

Acquisition (*Mostly assessed through traditional summative assessments)

Knowledge: Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

Students will know ...

- That the intersection of a pair of simultaneous linear equations is the solution.
- That there are multiple ways to solve systems of linear equations. ie. Graphical, tabular and algebraically.
- When the system of linear equation has a solution, multiple solution or no solution

Key Academic Vocabulary:

Systems of equations
Simultaneous
Simultaneously

Skills: The discrete skills and process students should be able to use independently (Bloom's Level of Learning should be noted in parentheses.)

Students will be skilled at:

- Solving systems of linear equations by graphing and substitution.
- Using the solution in a real world context.
- Solving simple cases by inspection